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09/873,243	06/05/2001	Thomas H. Stockmann	A882688US	5963
7590 03/27/2007 D. DOAK HORNE c/o GOWLING LAFLEUR HENDERSON SUITE 1400 700 - 2ND STREET S.W. CALGARY, AB T2P 4V5 CANADA			EXAMINER KRUER, STEFAN	
			ART UNIT 3654	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
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Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

DETAILED ACTION

Claim Objections

Claim 27 is objected to because of the following informalities: "... which the pair of apertures are situated proximate" is preferably written as "... which the pair of apertures is situated proximate". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 22 – 27 and 31, 33, 37, 39, 44 and 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 recites the limitation "the" in "the pressurized hydraulic fluid". There is insufficient antecedent basis for this limitation in the claim.

Claims 25, 31, 33, 37, 39, 44 and 46 recite the limitation "... one of the pair of apertures... is larger in area that the other of the pair of apertures" wherein area is indefinite as to the dimensions (axes) determining such area, for instance cross-sectional- or (internal) superficial area. For purpose of prosecution, area will be construed as that pertaining to a cross-section.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 22, 28, 34 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Mifsud (4,161,229).

Re: Claim 22, Mifsud discloses his positive displacement valve (22) comprising:

- a pair of longitudinally-moveable, spaced-apart pistons (300, 305),

Art Unit: 3654

- each piston operatively connected by a longitudinal shaft means (as in Fig. 3), so that the movement of one piston causes an equal movement of the other,
- each piston situated within a corresponding cylinder member (A, B),
- said cylinder members arranged in a juxtaposed relation to each other,
- said cylinder members having mutually opposite ends and an aperture (71, 77) proximate each of the opposite ends thereof so as to permit ingress and egress of pressurized hydraulic fluid,
- a piston phasing means (50d, 50c, 77 and 75) integral with at least one cylinder member (B) and operable to permit egress of at least some of the pressurized fluid (via 50d and porting to 20 as well as 50c and porting to 21) that is ingressing into the cylinder member.

Re: Claim 28, Mifsud discloses:

- a platform member (2) having two opposite side edges,
- first and second hydraulic cylinders (5, 7) each having a piston member (302, 301) therein,
- said hydraulic cylinders operatively coupled to a side edge of said platform,
- a pump means (20, "hydraulic high pressure source" (Col. 4, Line 4) via a positive displacement means (22),
- said positive displacement means comprising:
 - a pair of longitudinally-moveable, spaced-apart pistons (300, 305),
 - each piston operatively connected by a longitudinal shaft means (as in Fig. 3), so that the movement of one piston causes an equal movement of the other,
 - each piston situated within a corresponding cylinder member (A, B),
 - said cylinder members arranged in a juxtaposed relation to each other,
 - said cylinder members having mutually opposite ends and an aperture (71, 77) proximate each of the opposite ends thereof so as to permit ingress and egress of pressurized hydraulic fluid,

- and a piston phasing means (50d, 50c, 77 and 75) integral with at least one cylinder member (B) and operable to permit egress of at least some of the pressurized fluid that is ingressing into the cylinder member.

Re: Claim 34, Mifsud discloses his positive displacement means, platform member, first and second hydraulic cylinders, and pump means, as reviewed in Claims 22 and 28, as well as his piston phasing means (24) integral with at least one of his hydraulic cylinders (5, 7) and operable to permit egress of at least some of the pressurized fluid that is ingressing into the cylinder member (Col. 6, Line 57 – Col. 7, Line 3).

Re: Claim 40, Mifsud discloses his positive displacement means, platform member, first and second hydraulic cylinders, a pump means, and a piston phasing means (50d, 50c, 77 and 75) integral with his positive displacement means as reviewed in Claims 22 and 28, as well as a piston phasing means (24) integral with at least one of his hydraulic cylinders as reviewed in Claim 34.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23 – 25, 27, 29 – 31, 33, 35 – 37, 39, 41 – 44 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mifsud in view of Gray (5,110,251).

Re: Claims 23 – 25 and 27, Mifsud discloses his piston phasing means comprising a pair of apertures and valves, whereby Mifsud is silent regarding a pair of apertures proximate at least one end of the at least one of the cylinder members as well as a cross-sectional area of his apertures.

Attention is directed to Gray who teaches his cylinder members (8, 10, Fig. 4) having integral piston phasing means (66) comprising pair of apertures (68, 70) in at

Art Unit: 3654

least one of the cylinder members, spaced apart from each other on a longitudinal axis and proximate one end of at least one of his cylinder members, as a component of his inventive self-leveling feature. Furthermore, Gary teaches one (68) of the pair of apertures most proximate an end (34) of at least one the cylinder members (10) as having a cross-sectional area larger than that of another of the apertures (70, Col. 6, Line 35), thereby enabling flow through the lower port(s) as the piston(s) approaches its extended position to promote leveling of the pistons (Col. 7, Line 25) by means of a continuous, yet significantly reduced flow due to a resultant restriction in flow.

It would have been obvious to one of ordinary skill in the art to modify the reference of Mifsud with the teaching of Gray to provide paired porting of the cylinders of the positive displacement valve, said porting having apertures of unique areas, to complement, if not obviate the need for, the piston phasing means of Mifsud for the features of minimized shock to, and smoother transition of, the positive displacement valve, as well as the finer leveling characteristics to the pistons of the hydraulic cylinders.

Claims 26, 32, 38 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mifsud in view of Gray, as applied to Claims 23, 29, 35 and 41, respectively, and in further view of Colarelli et al (6,189,432).

Regarding Claims 26, 32, 38 and 45, Mifsud is silent regarding check valves to avert reverse flow and Gray teaches his check valve (56) in combination with his restriction means (50) to afford either a controlled descent of his cylinders or avert reverse flow.

Further consideration is directed to Colarelli et al who teach their check valve (40) proximate their positive displacement valve (38) and in fluid communication with one of the pair of apertures for checking reverse fluid flow.

It would have been obvious to one of ordinary skill in the art to modify the reference of Mifsud and Gray with the teaching of Colarelli et al to promote phasing of the cylinders as well as maintaining elevated position(s) of the platform.

Response to Arguments

Applicant's arguments filed 22 January 2007 have been fully considered but are not persuasive.

Mifsud discloses his "piston phasing means" as one of a plurality of interdependent components of his system that "...synchronizes the operation of the hydraulic lift cylinders...". Whereas the instant invention utilizes a plurality of apertures having unique diameters, thereby generating unique flow rates of the hydraulic fluid, to "...resynchronize the piston members ... thereby re-leveling the attached platform", Mifsud utilizes a valve (24) having means to address differentials in pressure attributable to non-synchronous movement of his cylinders "... to equalize movement ... and thus coordinate travel ..." and which operates in conjunction with multi-port valves that direct flow as piston phasing means of his positive displacement valve.

That the piston phasing means of the hydraulic cylinders of Mifsud is disclosed as a "drain valve" is not persuasive, in light of the above review as to its integrality in operating the hydraulic cylinders as well as its anticipation of the claim language.

Furthermore, that the piston phasing means of Mifsud acts to promote uniform travel of his hydraulic cylinders whereas that of the instant invention promotes continued travel of either cylinder for purpose of "catching up" to its counterpart that has reached its full extension is not pertinent with respect to the claim language.

Notably, the "piston phasing means operable to permit egress of at least some of the pressurized hydraulic fluid that is ingressing into the hydraulic cylinder" as well as that in conjunction with the cylinder member, as claimed, is anticipated by Mifsud.

Regarding either device, the porting of the respective piston phasing means permits the aforementioned ingress and egress of pressurized fluid of either vessel, as briefly explained by the retarded flow, for instance, from chamber 34b when ports 82 and 88 are blocked due to unequal speeds of travel of the pistons and the resulting unequal pressures of juxtaposed cylinder members of his "drain" valve.

Neither the original claim language nor the amended claim language overcame the rejections based on the prior art of record of the previous office action.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

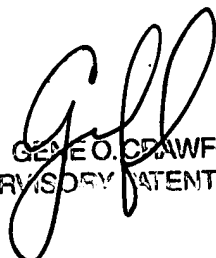
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Kruer whose telephone number is 571.272.5913. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571.272.6911. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free).

SHK
20 March 2007


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